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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,366	07/26/2001	Man Soo Choi	YPLEE7.001AP	1934
20995	7590	11/23/2004	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			HOFFMANN, JOHN M	
2040 MAIN STREET			ART UNIT	
FOURTEENTH FLOOR			PAPER NUMBER	
IRVINE, CA 92614			1731	

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/890,366

Applicant(s)

CHOI ET AL.

Examiner

John Hoffmann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 6-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 6-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Request for Information



### DETAILED ACTION

All previous Office actions are vacated. This rejection is based on the last claims which were properly submitted (dated 8/31/04).

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6, the term "cross-irradiated" is indefinite as to its meaning. Examiner has found the term used in different ways in other US patents. But none of them is consistent with applicant's usage. Namely there is no indication what is being crossed. If it is the flame which is being crossed, then why isn't the first irradiation a cross irradiation. A potential invention would not be able to tell whether a particular type of irradiation step was or was not a cross-irradiation step.

Alternatively: it is unclear if the cross irradiation of claim 6 is an additional radiation step, or if it merely further defines the irradiation of claim 1. There is no antecedent basis for "the area".

Claim 7 is inaccurate because a wavelength cannot be a band (of wavelengths). A band is a plurality of wavelengths. A single wavelength cannot be the "same as" a plurality.

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Claim 8: there is confusing antecedent basis for the laser beam. Also it is unclear if the "area" is the same as the unnamed location (where the aggregates start) of claim 1.

Claim 12: line 9: "past of the laser beam" does not make sense – it is unclear if "of" should be ignored. The phrase "at least one of other aggregates and particle nuclei" is not understood: it is unclear if it to be interpreted that aggregates collide with "aggregates and nuclei" or "aggregates or nuclei".

FURTHER:

From MPEP 2173.05(h):

Alternative expressions are permitted if they present no uncertainty or ambiguity with respect to the question of scope or clarity of the claims. One acceptable form of alternative expression, which is commonly referred to as a Markush group, recites members as being "selected from the group consisting of A, B and C." See *Ex parte Markush*, 1925 C.D. 126 (Comm'r Pat. 1925).

The group of claim 12 is somewhat similar to the above accepted form, but there is no indication that the group is "consisting of" the members. Therefore it is impossible for anyone to tell if applicant's group is open or closed to additional members - and thus the claim presents uncertainty or ambiguity with respect to the question of scope of the claim. If the above "acceptable form" is not desirable for Applicant, Examiner can be telephoned for other expressions.

Claim 14: there is no antecedent basis for "the position".

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 6-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1: Examiner could find no support for the new limitation that the laser beam is irradiated into the flame where the aggregates start being formed. At page 5, line 29 of the specification (among other places) it is indicated that the laser beam is used where the aggregates are already formed, not where they are merely starting to form. This is a prima facie showing of lack of compliance. The burden is now on applicant to demonstrate that invention was described in the specification.

Furthermore, there does not seem to be support for claim 8.

Claim 12 requires that the aggregates flow past the laser beam. Examiner could not find any explicit support for this new limitation. Examiner then looked for implicit support: page 5, lines 29-31 suggests that the laser causes the aggregates to "rapidly" convert to fine particles. It is very possible to conclude that it is the fine particles which leave the laser – not the aggregates. Regardless, the burden is now on applicant to demonstrate that the specification reasonably conveys that aggregates leave the laser beam.

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Claim 13: There doesn't seem to be support for the collecting of aggregates, as best understood, the aggregates are converted to particles before they are collected. The preamble of claim 12 indicates that nanoparticles are formed – there is no mention of aggregates.

### ***Conclusion***

This Office action has an attached requirement for information under 37 CFR 1.105. A complete reply to this Office action must include a complete reply to the attached requirement for information. The time period for reply to the attached requirement coincides with the time period for reply to this Office action.

### ***Response to Arguments***

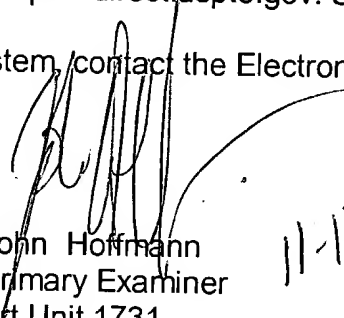
Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John Hoffmann  
Primary Examiner  
Art Unit 1731

11-13-04